

## ConsoleArray.java

```
1 package home.array;
2
3 public class ConsoleArray {
4
5     // This is to allow the user to access the program
6     public static void main(String[] args) {
7
8         /* Interface is the name of the object to access the
9          Executable Method from the InterfaceExecutable.java */
10        InterfaceExecutable Interface = new InterfaceExecutable();
11
12        // This is the introductory line prior the execution
13        System.out.println("-----");
14        System.out.println("        Cor Jesu College, Inc");
15        System.out.println("        Week 11 - Java Arrays");
16        System.out.println("        Authored by Aidre Cabrera");
17        System.out.println("-----");
18        System.out.println("\nWelcome to Galors Inn Booking Program!\n");
19
20        // This call the ExecutableMethod from the created object
21        Interface.ExecutableMethod(); // <--- Therefore, the program starts here :)
22    }
23 }
```



## ArrayLibrary.java

```
1 package home.array;
2
3 // The purpose of this abstraction
4 public class InterfaceExecutable {
5     ArrayLibrary InterfaceExecution = new ArrayLibrary();
6     /* When the ExecutableMethod is called,
7     it will execute all the methods from the
8     ArrayLibrary through the InterfaceExecution object */
9     void ExecutableMethod() {
10         InterfaceExecution.Name();
11         InterfaceExecution.DaysStay();
12         InterfaceExecution.AccommodationLogic();
13         InterfaceExecution.RoomRateLogic();
14         InterfaceExecution.OverallCalculation();
15         InterfaceExecution.ImportingBillCalculation();
16         InterfaceExecution.FinalOutput();
17         InterfaceExecution.PrintingFinalOutput();
18     }
19 }
```



```

1 package home.array;
2
3 import java.util.Scanner;
4
5 // Don't worry, this will be abstracted
6 public class ArrayLibrary {
7     Scanner mainScanner = new Scanner(System.in);
8     // Array Library for Accommodation
9     String[] AvailableAccommodations = {
10         "Office Room",
11         "Family Room",
12         "Sports Room",
13     };
14     // Array Library for Room Rates
15     double[] CurrentRoomRates = {
16         900.00,
17         750.00,
18         650.00,
19         825.00
20     };
21     // Array Library for Service Rates of Rooms
22     int[] CurrentServiceRate = {
23         6,
24         4,
25         2
26     };
27
28     String userName;
29     int userRoomRate;
30     int userAccommodation;
31     double SessionServiceRate;
32     String SessionAccommodation;
33     double SessionRoomRate;
34     int SessionDaysStay;
35     double AccommodationFee, ServiceFee, GrossFee;
36
37     // Container for calculated values
38     double[] BillContainer = new double[3];
39
40     // Container for the receipt contents
41     String[] FinalOutputContainer = new String[9];
42
43     // This is to acquire the name of the guest
44     void Name() {
45         System.out.println("Guest Name: ");
46         userName = mainScanner.nextLine();
47         while ((userName.length() > 20)) {
48             System.out.println("Invalid input! Try again.");
49             userName = mainScanner.nextLine();
50         }
51         System.out.println("\nHi, " + userName + "\n");
52         System.out.println("Please enter the necessary details :)\n");
53     }
54
55     // The methods are intuitive enough since it is labeled properly.
56     // Format is [DETAIL TYPE] + Logic()
57     void AccommodationLogic() {
58         System.out.println("Accommodation Code (1-3): ");
59         userAccommodation = mainScanner.nextInt();
60         SessionAccommodation = AvailableAccommodations[userAccommodation-1];
61         SessionServiceRate = CurrentServiceRate[userAccommodation-1];
62     }
63     void RoomRateLogic() {
64         System.out.println("Room Number (1-4): ");
65         userRoomRate = mainScanner.nextInt();
66         while (userRoomRate > 4) {
67             System.out.println("We only have 4 Rooms. Please re-input!");
68             userRoomRate = mainScanner.nextInt();
69         }
70         SessionRoomRate = CurrentRoomRates[userRoomRate-1];
71     }
72     void DaysStay() {
73         System.out.println("Days Stay (2-30): ");
74         SessionDaysStay = mainScanner.nextInt();
75         while ((SessionDaysStay < 2) || (SessionDaysStay > 30)) {
76             System.out.println("We only allow the amount of days stay from 2 to 30 days. Please re-input!");
77             SessionDaysStay = mainScanner.nextInt();
78         }
79     }
80     void OverallCalculation() {
81         AccommodationFee = SessionRoomRate * SessionDaysStay;
82         ServiceFee = AccommodationFee * (SessionServiceRate/100);
83         GrossFee = AccommodationFee + ServiceFee;
84     }
85     void ImportingBillCalculation() {
86         BillContainer[0] = AccommodationFee;
87         BillContainer[1] = ServiceFee;
88         BillContainer[2] = GrossFee;
89     }
90     void FinalOutput() {
91         FinalOutputContainer[0] = userName;
92         FinalOutputContainer[1] = String.valueOf(userRoomRate);
93         FinalOutputContainer[2] = SessionAccommodation;
94         FinalOutputContainer[3] = String.valueOf((int)SessionServiceRate);
95         FinalOutputContainer[4] = String.valueOf( String.format("%.2f",
96 SessionRoomRate));
97         FinalOutputContainer[5] = String.valueOf(SessionDaysStay);
98         FinalOutputContainer[6] = String.valueOf(String.format("%.2f",
99 BillContainer[0]));
100         FinalOutputContainer[7] =
101 String.valueOf(String.format("%.2f",BillContainer[1]));
102         FinalOutputContainer[8] =
103 String.valueOf(String.format("%.2f",BillContainer[2]));
104     }
105     void PrintingFinalOutput() {
106         System.out.println("\n\n-----Receipt-----");
107         System.out.println(
108             "\nGuest Name: " + FinalOutputContainer[0] +
109             "\nRoom Number: " + FinalOutputContainer[1] +
110             "\nAccommodation: " + FinalOutputContainer[2] +
111             "\nService Rate: " + FinalOutputContainer[3] + "%" +
112             "\nRoom Rate: " + FinalOutputContainer[4] +
113             "\nDays Stay: " + FinalOutputContainer[5] + " days" +
114             "\nAccommodation Fee: " + FinalOutputContainer[6] +
115             "\nAdd Service Fee: " + FinalOutputContainer[7] +
116             "\n\nGross Fee: " + FinalOutputContainer[8]
117         );
118         System.out.println("\n\n-----");
119     }
120 }

```